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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,636	12/30/2003	Ahmad Fakhri	72611-003	6883
29493 7590 10/31/2007 HUSCH & EPPENBERGER, LLC 190 CARONDELET PLAZA SUITE 600 ST. LOUIS, MO 63105-3441			EXAMINER LEO, LEONARD R	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/748,636

Applicant(s)

FAKHERI, AHMAD

Examiner

Leonard R. Leo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-8, 10-12, 20, 23, 26, 28, 29, 31 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) 4, 10, 20, 23, 29, 31 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-8, 10-12, 20, 23, 26, 28, 29, 31 and 33-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 22, 2007 has been entered.

Claims 1 and 32 are cancelled, claims 3-8, 10-12, 20, 23, 26, 28-29, 31 and 33-38 are pending, and claims 4, 10, 20, 23, 29, 31 and 35 remain withdrawn from further consideration. Applicant is reminded to include the proper claim identifier with respect to the *withdrawn* claims, even though the claims may be amended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 5, 8, 11, 20, 26, 34, 36 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Steenstrup. Regarding claim 5, Figure 2 discloses fins 25 having fin segments spaced apart at regular intervals. Regarding claims 8 and 36, Figure 2 discloses helical conduit 21 is circular shaped. Regarding claim 11 and 26, Figure 1 discloses fin segments have a plurality of openings or slots along the edge thereof corresponding to the number of loops of the

helical conduit 21. Regarding claim 34, the device of Steenstrup structurally meets the claim limitations. See MPEP 2114.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steenstrup in view of Ares.

Steenstrup discloses all the claimed limitations except a blower within the core.

Ares discloses a heat exchanger comprising a core 16a, 16b having regularly spaced apart fin segments 20a, 20b and blower 44 disposed within the core for the purpose of increasing airflow to improve heat exchange.

Since Steenstrup and Ares are both from the same field of endeavor and/or analogous art, the purpose disclosed by Ares would have been recognized in the pertinent art of Steenstrup.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steenstrup a blower disposed within the core for the purpose of increasing airflow to improve heat exchange as recognized by Ares.

Regarding claim 12, Figure 6 of Ares discloses collars 52 defining through-holes in the fin segments 20a, 20b.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steenstrup et al in view of Dailey.

The device of Steenstrup et al lacks a blower around the core.

Dailey discloses a heat exchanger comprising a core 62 and blower 50 disposed around the core for the purpose of increasing airflow to improve heat exchange.

Since Steenstrup et al and Dailey are both from the same field of endeavor and/or analogous art, the purpose disclosed by Dailey would have been recognized in the pertinent art of Steenstrup et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steenstrup et al a blower disposed around the core for the purpose of increasing airflow to improve heat exchange as recognized by Dailey.

Claims 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steenstrup in view of Fieni or Scholl.

The device of Steenstrup lacks the conduit having a non-circular cross-section.

Fieni discloses a heat exchanger comprising a plurality of fins 10 having through-holes 11 receiving conduits 17 having a circular or oval cross-section (column 2, lines 57-58) for the purpose of achieving a desired heat exchange.

Scholl discloses a heat exchanger comprising a plurality of fins 1 having through-holes 27 receiving conduits 30-32 having a circular, drop-shaped or elliptical cross-section (Figures 9-11) for the purpose of achieving a desired heat exchange.

Since Steenstrup and Fieni or Scholl are both from the same field of endeavor and/or analogous art, the purpose disclosed by Fieni or Scholl would have been recognized in the pertinent art of Steenstrup.

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steenstrup a conduit having a non-circular cross-section for the purpose of achieving a desired heat exchange as recognized by Fieni or Scholl. As clearly demonstrated by the prior art, conduits of various geometric cross-sections are obvious variants of one another.

Response to Arguments

The rejection of claims 32 and 37 under 35 U.S.C. 112, first paragraph, is withdrawn in view of the cancellation of claim 32 and the amendment to claim 37.

The rejections in view of Nelson et al and Newman (2,029,890) are withdrawn in view of the claim amendments.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

No further comments are deemed necessary at this time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ LEONARD R. LEO /
PRIMARY EXAMINER
ART UNIT 3744

October 29, 2007